DOCUMENT RESUME

ED 072 238 VT 018 683

TITLE	Development of a Research Instrument Which Can Assess the Occupational and Educational Status of Former Occupational Enrollees of North Carolina Community Colleges and Technical Institutes. Occupational Education Research Project Final Report.
INSTITUTION	Guilford Technical Inst., Jamestown, N.C.
SPONS AGENCY	North Carolina Research Coordinating Unit in Occupational Education, Raleigh.; Office of Education (DHEW), Washington, D.C.
PUB DATE	30 Jun 72
NOTE	83p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Community Colleges; *Followup Studies; Graduate Surveys; Post Secondary Education; Questionnaires; *Research Methodology; *Technical Institutes; Vocational Education; *Vocational Followup
IDENTIFIERS	*North Carolina

ABSTRACT

This project was conducted to assess the condition of followup studies throughout the state and to develop an instrument for gathering data relative to the employment and educational status of former students of the community colleges and technical institutes in the North Carolina system. Data-gathering instruments and existing data from the colleges and institutes were examined to determine existing commonalities and central issues. On the basis of this examination, a followup instrument was developed and pilot tested with a sample of 210 former students, which included non-degree, degree, diploma, and certificate students. Data from the pilot study were analyzed, and as a result of the analysis, modifications were made in several questions. It was concluded that the revised instrument accurately reflects the concerns of North Carolina's community colleges and technical institutes and will provide data both for institutional self study and for central long-range planning. The instrument and several project materials are appended. (SB)

Final Report of
OCCUPATIONAL EDUCATION RESEARCH
PROJECT
entitled:

DEVELOPMENT OF A RESEARCH INSTRUMENT WHICH CAN ASSESS THE OCCUPATIONAL AND EDUCATIONAL STATUS OF FORMER OCCUPATIONAL ENROLLEES OF NORTH CAROLINA COMMUNITY COLLEGES AND TECHNICAL INSTITUTES

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ED 072238

NORTH CAROLINA STATE BOARD OF EDUCATION
Department of Public Instruction
Division of Research
Occupational Research Unit
Raleigh, N. C. 27602

FINAL REPORT

Occupational Education Research Project entitled:

DEVELOPMENT OF A RESEARCH INSTRUMENT WHICH CAN ASSESS THE OCCUPATIONAL AND EDUCATIONAL STATUS OF FORMER OCCUPATIONAL ENROLLEES OF NORTH CAROLINA COMMUNITY COLLEGES AND TECHNICAL INSTITUTES

June 30, 1972

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Precis of "Development of a Research Instrument which can assess the occupational and educational status of former occupational enrollees of North Carolina Community Colleges and Technical Institutes".

EDUCATIONAL FOLLOW-UP RESEARCH PROJECT

A. Description of the problem

P.L. 90-576

Guilford Technical Institute received an appropriation of ~~Title I~~ funds to conduct a research and create an instrument for assessing the occupational educational status of former occupational enrollees in North Carolina Community Colleges and Technical Institutes. The impetus for this came from the Department of Community Colleges and Technical Institutes in order to provide data for long range planning and to assist individual institutions in their own self evaluation. Prior to this there was no systematic collection of follow-up data on former enrollees at Community Colleges and Technical Institutes in North Carolina. Of course efforts were made by individual institutions to follow-up their own students with an eye toward modifying the curriculum when necessary, expanding their programs where appropriate and to aid in their own planning for the future. However no systematic collection of data on a statewide basis was attempted or even possible with the diversity of collection instruments employed. The intent of this project then, was to assess the condition of follow-up studies throughout the state and to develop an instrument that each institution could use which would provide baseline data on a statewide level.

B. Objectives

The principal objective of the project was to produce an instrument for gathering data relative to the employment and educational status of

former students, both graduate and non-graduate, of Community Colleges and Technical Institutes in the North Carolina system. In addition to the primary objective the study was also designed to determine the most productive method of enhancing responses.

C. Procedures

The first portion of the study consisted of contacting all the Community Colleges and Technical Institutes in North Carolina to determine what was currently being done in follow-up studies. Data-gathering instruments being used were assembled for analysis. Data collected from the Technical Institutes and Community Colleges were studied to determine what commonalities exist. The variety of data gathering instruments was as wide as one would imagine. Some institutions used a maximum of eight or ten questions while other had elaborate questionnaires with seventy five or more items on them.

Despite the diversity of data gathering instruments, an attempt was made to determine the central issues most frequently mentioned and to create a questionnaire of manageable length that addressed the primary concerns of most institutions. Once a tentative group of questions had been identified, the Community College and Technical Institute Presidents were asked to evaluate a preliminary instrument and to make suggestions or recommendations. These responses were used to create a pilot instrument.

The next step was to evaluate the instrument through pilot testing. A sample of former Guilford Technical Institute students were identified to serve as the sample for a pilot test of the instrument. These included both people who had graduated with a certificate, diploma or degree and people who had attended for a limited number of courses and

left before they had completed their studies.

Once the sample had been identified questionnaires were mailed. In due time follow-up letters were sent to the slow responders.

In addition to the basic task of creating a follow-up instrument, the investigators were charged with the responsibility of determining the manner in which returns could be most enhanced. Specifically a comparison was made between the effectiveness of follow-up letters and telephone follow-ups.

Data from the pilot study sample were collected and analyzed to determine whether or not the instrument could provide the kinds of answers that institutions seem to need to guide them in their planning and which would be helpful to the Division of Community Colleges and Technical Institutes in the long-range planning function. An interesting piece of information disclosed by the pilot study shows that a difference of $56.00 in monthly wages favoring graduates over non-graduates working in the field for which they trained. Surprisingly, for those not working in the field for which they trained, non-graduates earn an average of almost $88.00 per month more than graduates. Further analysis showed that these non-graduates not working in an area for which they trained usually came to take a course for personal enrichment with no intention of working in that field.

This analysis of the data proved to be most interesting and showed that while several questions produced results as anticipated some others should be modified. These modifications consisted primarily of expanding the choice of responses to include some contengencies not provided for in the pilot instrument thereby reducing the incident of "other" responses.

D. Conclusions and Recommendations

The revised instrument seems directly geared to the concerns of the State's Technical Institutes and Community Colleges. The present format is amenable to both hand compilation and machine treatment. The questions included seem to be diverse enough to cover the areas of greatest concern to the institutions themselves and general enough so that the long-range planning function at the State level may still be accomplished. The number of items included in the questionnaire seem to be the minimum to cover sufficiently the aspects of what individual institutions seem to find of greatest concern. The instrument has been assembled containing items of interest to the individual institutions and the planners at state level.

The entire questionnaire could be analyzed at the institutional level. The questionnaire has been so constructed that the second page may be retained by the institution and the first detached and forwarded to a central collection point if it is determined that the responses on page one are sufficient for the long-range planning function at the state level. This idea is appealing in terms of practicality because institutions certainly do not desire to perform a follow-up function once for themselves and once for the state department.

The first evolution of the present instrument would be adaptation for machine handling. The detail of such things as card layout and curricula code are minimal and would best be determine by a central agency should this instrument be adopted for statewide use.

The instrument represents a simple, direct attempt to collect data that seems to reflect the primary interests of Community Colleges and

Technical Institutes. It is manageable without being simplified to the point of uselessness. It is sufficiently broad without running to superfluous detail. It seems that the conscious effort to attain a practical, statewide data gathering instrument has been realized.

Questionnaire Code
(___ ___ ___ ___)
(1) (2) (3) (4)

NAME _____

Curriculum _____ (_____) Last date attended Day ____ (7-8) Month ____ (9-10) Year ____ (11-12)
(5-6)

Graduate: Yes ____ No ____. County of residence: _____
(13) (14-15)

1. Are you presently employed in a job for which you trained at this institution? Yes ____ No ____. Give your job title: _____
(16)

2. If you have no objections, please give your hourly, weekly, or monthly salary before any deductions. Hourly _____ or Weekly _____ or Monthly _____
(17-20)

3. If you are not presently employed in a job for which you trained, why not? (In some cases more than one check will be needed.)

(21, 22)
___A. (0) No jobs available for which I trained.
___B. (1) Jobs for which I trained were available but my training was insufficient.
___C. (2) I originally took a job for which I trained but I am presently doing another kind of work.
___D. (3) Medical reasons (including maternity and family illness)
___E. (4) Furthering my education.
___F. (5) Homemaking.
___G. (6) Military.
___H. (7) Did not stay in school long enough.
___I. (8) Dissatisfaction with the work for which I trained.
___J. (9) Took the course for personal enrichment.
___K. (10) Did not try to find job in field.
___L. (11) Other-specify _____

4. How necessary was your school training in getting your present job? (Check one.)

(23)
___A. (1) Required.
___B. (2) Very helpful.
___C. (3) Of some help.
___D. (4) No help at all.
___E. (5) Not applicable.

5. If you did not graduate, why not? (Check one.)

(24)
___A. (1) Personal, medical, and family concerns.
___B. (2) Military (including draft and active service).
___C. (3) Moved away from the area.
___D. (4) Did not intend to graduate when I enrolled.
___E. (5) Financial.
___F. (6) Personal enrichment.
___G. (7) Other-specify _____

6. To what extent are you using your school training in doing your present job? (Check one.)

(25)
___A. (1) Couldn't do my job without the training.
___B. (2) Find the training very helpful.
___C. (3) Find the training of some help.
___D. (4) Find the training of no help at all.
___E. (5) Not applicable.

7. Are you interested in taking other courses at this institution? Yes ____ No ____. What courses? _____

8. Sometimes students find that programs contain courses that are not useful to the jobs they take. Sometimes some subjects were not covered well enough or other courses should be included in the program. Rate the program you took. (Check one.)

(26) ___A. (1) The program covered more than I needed to know to do my job.
___B. (2) The program covered just what I needed to know to do my job.
___C. (3) The program covered less than what I needed to know to do my job.

9. Using the scale from Superior to Poor, evaluate the teaching for each of the course groupings in which you studied. Use only one check for each.

	(1) Superior	(2) Very Good	(3) Average	(4) Below Average	(5) Poor
(27) English/Social Studies					
(28) Lecture Courses in Your Major Area of Study					
(29) Shop/Lab/Clinic Courses in Your Major Area of Study					
(30) Lecture Courses Outside Your Major Area of Study					
(31) Shop/Lab/Clinic Courses Outside Your Major Area of Study					

10. In most courses training aids and equipment are used for demonstration and practice. Here we are interested in the amount of available equipment. Rate the amount of available equipment and training aids for each of the course groupings in which you studied.

	(1) Always Plenty	(2) Usually Enough	(3) Just enough to get by	(4) Not Enough
(32) English/Social Studies				
(33) Lecture Courses in Your Major Area of Study				
(34) Shop/Lab/Clinic Courses in Your Major Area of Study				
(35) Lecture Courses Outside Your Major Area of Study				
(36) Shop/Lab/Clinic Courses Outside Your Major Area of Study				

11. No matter how available, unless equipment and training aids are modern and appropriate for the job, the quality of instruction suffers. By the major course groupings listed below, rate the equipment used according to how modern and appropriate it was for the job

	(1) Very Modern and Appropriate	(2) Adequate but Needs Up-Dating	(3) Not Adequate
(37) English/Social Studies			
(38) Lecture Courses in Your Major Area of Study			
(39) Shop/Lab/Clinic Courses in Your Major Area of Study			
(40) Lecture Courses Outside Your Major Area of Study			
(41) Shop/Lab/Clinic Courses Outside Your Major Area of Study			

EDUCATIONAL FOLLOW-UP RESEARCH PROJECT

A. HISTORY OF THE PROJECT

In the Fall of 1970 Guilford Technical Institute submitted a proposal under Title I of the Occupational Research Unit of the North Carolina Board of Education for funds to develop a research instrument for assessing the occupational and educational status of former occupational enrollees in North Carolina community colleges and technical institutes. The project was funded to begin July 1, 1971, and end October 1, 1971; however, the actual beginning was delayed until October, 1971.

The objective of the project was to produce an instrument for gathering data relative to the employment and educational status of former students, both graduates and non-graduates, of community colleges and technical institutes of the North Carolina system. An evaluation of follow-up letters and telephone interviews to enhance responses was to be an integral part of the study.

The findings of this study may be used by individual institutions for evaluating existing curriculum and counseling programs. Also, they may be used by individual institutions for planning and as a source of information constantly in demand from other institutions, the federal government, and state departments of instruction. In addition, the entire Technical Institute and Community College System could use this data-gathering instrument for planning and evaluation at the state level.

The writer became involved with the project on October 8, 1971, as a result of a trip to Raleigh, North Carolina, with Mrs. Sylvia Clayton and Mr. Albert P. Lochra of Guilford Technical Institute. These three visited

representatives of the Department of Community Colleges, specifically General Fisher, to discuss the research project to be undertaken. General Fisher is in charge of long-range planning for the Community College System. This meeting was of considerable help in clarifying the requirements of the Community College System and in obtaining a firmer grasp of the overall operation. On October 15, 1971, a meeting was held in Raleigh with Mr. Fred Manley, Assistant Director of the Occupational Research Unit, to discuss the study and to outline its financial aspects.

Subsequent to these two meetings, a research office was officially opened on November 8, 1971. This office was on the second floor of the Administration Building at Guilford Technical Institute. The first few days were devoted to organization and ordering supplies, materials, letterheads, envelopes, etc. In addition, the office was outfitted with a typewriter, desk, filing cabinet, and other necessary accouterments. Files were established for the 55 schools in the Community College System and mailing lists were prepared.

The initial phase of the study consisted of familiarization with the project, establishing lines of communication with administrators within the Community College System, locating a suitable place for establishing headquarters, and setting up these headquarters in preparation for beginning the study itself.

B. DEVELOPMENT OF THE INSTRUMENT

1. Examination of existing practices.

It was assumed at the onset that the majority of the community colleges and technical institutes would already have some sort of follow-up practice in operation. Therefore, it was decided to examine these existing practices to find out what the institutions deemed important and from these findings an effort would be made to create one instrument that would suffice for all. On November 18, 1971, a letter was sent to the presidents of the community colleges and technical institutes requesting information on their present follow-up activities and asking them to suggest questions for an instrument that might be applicable statewide. The specific request was for a half-dozen questions which they considered most important. This letter was dated November 16, 1971. After a two-week interval, a follow-up letter dated December 2, 1971, was sent to the presidents who did not respond to the letter of November 16. Copies of the letters of November 16 and December 2 to the presidents of the community colleges and technical institutes are available in Appendix A.

During the interval from the time the first letter was sent to the presidents until the follow-up letter was sent, a conference was held with Marcus Allred at Forsyth Technical Institute concerning a research project conducted at that school involving follow-ups. In addition, a conference was held with Dr. Bill Richardson of Wilkes Community College about research being conducted by the Appalachian Consortium. In both instances, the details of research underway were investigated to insure that the present project was not a duplication of efforts already in progress. Copies of the materials developed by Mr. Allred and by the Appalachian Consortium, headed by Dr. Elmo Roesler

at Appalachian State University, were made available for study.

The returns from the letters to the community college presidents were studied at some length in an effort to identify elements common to the interest of all the responding institutions. The ultimate response to the request was better than 90% from the 55 community colleges and technical institutes.

2. Creation of a new instrument.

The information gathered from the original two mailings to community colleges and technical institutes enabled a limited number of questions to be selected and formatted into a tentative questionnaire. On February 23, 1972, a letter was mailed to each community college and technical institute president enclosing the proposed questionnaire and a rationale supporting each question. Copy of this letter with the tentative questionnaire and rationale attached is available in Appendix B.

The response to this questionnaire was quite extensive and enthusiastic, with approximately half the institutions responding in some fashion to the requested critique. Some responded with suggested modifications to the questionnaire, and others said they thought the questionnaire was excellent for their purposes and should stand as it was. When it was assumed that all institutions who intended to respond had done so, the suggestions incorporated in those responses were surveyed to determine their feasibility for incorporation into the instrument. The modified questionnaire was then prepared for pilot testing.

The questionnaire was formatted with an eye toward encouraging responses since this was to be applied by mail and mailed questionnaires are notorious for poor returns. Travers says that "a questionnaire of some interest to the recipient may be expected to show only a 20% return even when conditions

are favorable . . . when contacted the second and third time the returns may be increased to 30%, only rarely does it reach the 40% level."[1]

The researchers intended to create a questionnaire that could be answered with a minimum of difficulty on the part of the recipient. The researchers needed a questionnaire that would be answered primarily by a checkmark.

One of the principal tenents of good questionnaire construction is that information is not requested from the respondent which is available from other sources. The tentative questionnaire contained the following information: the name of the recipient, the curriculum in which he was enrolled, the last date he attended, and whether or not he graduated. These items were entered before the questionnaires were mailed. This personal touch would, hopefully, enhance the probability of the individuals responding to the questionnaire.

(a) Rationale.

The questions were nine in number, in addition to inquiring about the recipients' county of residence. In reviewing the questionnaires returned by the various community colleges and technical institutes, one of the most important things, judged by frequency of occurrence, was whether the respondent was presently employed in a job for which he trained. It was obvious from the onset that this would be one of the questions. In addition to this, the individual was asked to give his job title as a crosscheck to validate his estimate of whether the job in which he had been working was one for which he trained. If the job title obviously did not correlate with his response to the question about working in a job for which he trained, the researchers would be alerted. It is also evident, however, that job titles sometimes

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[1]AN INTRODUCTION TO EDUCATIONAL RESEARCH, Robert W. M. Travers, MacMillan Company, New York, New York.

do not give the full picture; and if the discrepancy could not be resolved, a check would be made with the respondent for more detailed information.

The second question was one concerning salary. This information may be used for many purposes such as for correlating salary with curriculum, thereby producing information useful to the counseling program. Also, a comparison of several job areas for income potential on a current basis would probably be of interest to many students.

If figures show that increased training (i.e., a degree program instead of a certificate program) produces correspondingly greater earnings, then counselors should make this information available to students.

If, indeed, some areas of study are turning out graduates to compete for jobs with limited earning potentials, then a serious question may be raised about maintaining such programs.

Question 3 crosschecks question 1. If question 1 is answered "No" (the person is not employed in a position for which he trained), question 3 asks him to tell why he is not so employed. The eight possible responses were believed to have considerable implications in the counseling program. The first two choices were: (1) no jobs available for which I trained, and (2) jobs for which I trained were available, but my training was insufficient. These items are of concern to the local institution. If a significant number of respondents choose either of these responses, no doubt the institution will be seriously concerned. If no jobs were available for which numerous people trained, obviously the institution will seek to determine if this condition still exists or was temporary in nature and existed only at the time the respondents were in school. If the condition still exists and is likely to continue, then the institution would be remiss if new students were not informed of this fact. If the training was insufficient, the

necessity for a re-evaluation of the institution and/or the curriculum is obvious.

Question 4 and 5 relate to getting a job and the training necessary for the successful execution of that job. These two concerns came through very strongly from the suggestions submitted by the community colleges and technical institutes. It is believed that these two questions will aid in evaluating the influence of the schooling upon obtaining a job and upon the relationship between training and job requirements. Also, it provides a check on how well the institutions are preparing people for jobs they are doing.

Question 6 gives an idea of the adequacy of the course content. There is no point in burdening students with superfluous detail, and curricula that stops short of providing what is needed will not be condoned. Question 6 is predicated on the basis that mature individuals working in the field and who have acquired first-hand knowledge of what is actually necessary to do their job will respond. If it is found that the programs are consistently covering less than students require to do an effective job, we must turn our attention to expanding these programs to fulfill all the needs of students. If, on the other hand, the programs are presently covering more than is necessary, perhaps undue liberty is being taken with the student's training time that could better be applied elsewhere. In either case, a significant number of responses in either direction would call for close scrutiny of the programs to which they refer.

While question 7 deals with the qualitative aspects of teaching, questions 8 and 9 provide quantitative and qualitative measures of the equipment and training aids. Student opinion about the quality of teaching is a fertile field for controversy. In the present instance mature people are asked to evaluate how well instructors trained them. This is obviously of

considerable concern to the respondent--his livelihood depends to a great extent upon it. The responses from the sample indeed indicate that responsible consideration has been applied in making these evaluations. The respondent was asked to evaluate teaching in five areas so that if dissatisfactions appeared, the institution could localize the problem and effect solutions. One would assume that a certain small percentage of students, unsuccessful, would reflect their own dissatisfaction by transferring their inadequacies to the teacher. There appears to be no way to evaluate the degree to which this was operating in the pilot study, but the relatively low incidence of "below average" and "poor" responses (47 out of 811 or approximately 6% "below average," with only 27 or 3% "poor"), indicates that this was certainly not a large factor among the respondents.

It was anticipated that in nine questions the following was identified: (1) whether the individual responding is working; (2) whether he is working in a job for which he trained; (3) some measure of his relative success by inquiring as to the amount of money he is making (the last two questions seem to have strong implications for guidance and counseling programs); (4) to what degree the schooling he received was responsible for his getting and keeping a job (this appears to be the ultimate question that must be answered); (5) a measure of his satisfaction with course content; (6) his evaluation of teaching at the institution; and (7) a measure of the qualitative and quantitative aspects of the teaching medium.

This is admittedly a subjective evaluation, asking the opinion of mature students who have sat through the classes and who are now out making a living. This, perhaps, is the most pragmatic test of their training. They are asked to look back on their training to determine whether their instructors in the various components of their curriculum did adequate jobs.

Remember, the people out working in the field are asked to respond to these questions. It is very likely that the individuals did not know at the time they were in school whether the equipment and materials were efficiently used or adequate in supply. However, once they have gone into the field and learned the requirements of the field, they, upon reflection, should be able to determine whether equipment and training aids were in adequate supply and whether they were modern or appropriate to the job. The thinking that prompts these two questions is this: If an individual is trained to go out and repair television sets but is not provided with sufficient test equipment of a modern design with which to examine television sets, he can't possibly be expected to be a good television repairman. By the same token, if there are insufficient quantities of such test equipment so that he does not have enough hours of training on each piece of equipment to be proficient, then again he is handicapped. A more absurd analogy might be that of teaching someone to repair telephones, in which case one would hardly expect to teach him to repair wall telephones that operate with a crank now that sophisticated push-button equipment is available. This inquiry is directed to people knowledgeable of the program, people who have been through the process, and who are now in the world fairing well or poorly relative to the instruction they received.

The questionnaire thus devised represents a synthesis of the most important questions that the majority of institutions around the state have been utilizing in their follow-up studies. It must be remembered that the questionnaires collected from various institutions varied in length from very short to extremely long. Some institutions have been using 5 or 6 page questionnaires with some fifty, sixty, or seventy pieces of information. Others have been using more abbreviated formats. The present questionnaire

was deliberately kept to a bare minimum for two very simple reasons. (1) Respondents are more likely to answer a questionnaire requiring a minimum amount of time than to respond to questionnaires that require much interpretation and considerable time to answer. (2) In aggregating responses to the questionnaire and utilizing the results, it is rather essential that the work required be kept at a minimum. For these two reasons the number of questions were deliberately restricted, and perhaps some of the institutions which adhere to a very lengthy questionnaire will be less than happy with a questionnaire that asks so few questions. A cursory review of these contemporary questionnaires reveals that many seek extraneous information such as the number of dependents the student has or whether the individual thinks the institutions should have an alumni association. These kinds of questions do not add to the knowledge needed to modify curriculum or to supply data to a guidance and counseling program. Even though these pieces of information may be extremely interesting and in some isolated locations may have some bearing on the issue, on a statewide basis these kinds of data are not necessary nor even desirable. It is felt that the current questionnaire inquiring about the individual's training and his post-training experience is sufficient for the purposes at hand and will allow the measures it evaluates to be taken with the very minimum amount of time and aggregated with a minimum of effort. Bear in mind that this proposed instrument represents basic information and that local institutions would still be free to make any additions that local conditions and interests necessitate.

(b) Format.

Perhaps most institutions will be interested in processing the results of their follow-up surveys by the use of a computer. No doubt there are other institutions who will find this impractical or impossible. The format

selected was one which would be amenable to analysis by computer and still retain the feature of good manageability for manual compilation. The questionnaire was designed so that almost all responses were in terms of a check-mark in the appropriate spot. A conscious effort was made to reduce the amount of coding necessary when the instruments were returned. For some items, such as job title, this is extremely difficult. It may not be necessary to code job titles for most analyses. Having them on file on the returned questionnaires may be all that is needed. However, job titles can be classified when returns come in if it is desirable. The county of residence is easily coded using 0 through 99 for an alphabetical listing of the 100 counties in North Carolina. The respondents are asked to state their salaries. This is recorded as a monthly salary figure and can be recorded "as is" for computer manipulation. The coding for curriculum can be done before the questionnaires are mailed and is a one-time operation with the exception of adding more curricula as they are initiated. For statewide application, it will be necessary to provide for institutional identification. Card columns 70-75 could be used to code institutions according to the six-digit F.I.C.E. Code as found in the Educational Directory published by the office of Health, Education, and Welfare.

Some institutions may choose to make the questionnaire more attractive by having it printed on heavier stock which can be folded and returned without the necessity of an envelope. For our pilot testing program, the questionnaire was simply duplicated on standard office equipment. This is considerably more economical and may be quite attractive to many institutions. There is no indication, through comments from respondents, that this had a negative effect on our sample.

C. PILOT TESTING THE NEW INSTRUMENT

The evaluation of the instrument was done in two phases. The first phase consisted of administering the instrument to a sample of Guilford Technical Institute graduates and non-graduates. The second phase consisted of determining the best method of achieving responses.

After the questionnaire was mailed and a reasonable interval was allowed for returns, a follow-up letter was sent to those not having returned the questionnaire. After a reasonable interval to allow for late responses, a different tack was taken. Of those still not having returned the questionnaire, a selected group was telephoned and urged to complete the questionnaires they had received earlier. Part of the group telephoned were asked to give answers to the questionnaire over the telephone. This in effect provides three different types of responses. The last two tended to merge together in actual practice. Some who were asked to return the questionnaire volunteered to give answers on the phone, and some who were asked to respond over the phone said they would prefer to send in the questionnaire.

In reviewing pilot testing plans, it was decided that an additional small study would be completed simultaneously. There had been quite a bit of discussion among people involved in the development of the instrument as to whether or not to place the respondent's name on the questionnaire. There was some concern that putting names on the questionnaire would result in biased answers or no answers at all since a question about salary was asked. It was decided to investigate whether or not names should be placed on the questionnaires. If the effects were negligible, there would be an advantage to having names on the questionnaire because it would provide a direct record of who responded as well as a list of names to contact on

follow-ups. This would reduce the cost of follow-up letters since we have fewer to mail each application.

1. Sample.

The universe was defined as graduates and non-graduates of Guilford Technical Institute for the years 1970 and 1971. The graduates were divided into those who obtained a certificate, those who received a diploma, and those who were awarded a degree. At Guilford Technical Institute, and typically in other technical institutes throughout the state, those seeking certificates generally do so in such subjects as drafting, machine shop, heating and air conditioning, and welding. Those seeking diplomas do so in areas such as cosmetology, automotive mechanics, dental assistant, practical nursing, and upholstery. Those seeking degrees do so in fields such as electronics, accounting, architecture, commercial art, data processing, and dental hygiene.

There were graduates and non-graduates in each area. The number of people was ascertained in each of the two categories, graduate and non-graduate, in each of the three types of programs--certificate, diploma, and degree. The six groups identified were divided so that approximately one-half would receive a questionnaire with their name on it and approximately one-half would receive a questionnaire without their name. The samples were drawn from people who had been in attendance at Guilford Technical Institute during the years 1970 and 1971. It was deemed unnecessary to go back any farther for the purposes of evaluating this instrument since a total of over 700 students for the two years was available. Questionnaires were eventually mailed to 768 GTI students. A cover letter accompanying this mailing briefly specified the purpose and asked their cooperation in taking the time necessary to complete the questionnaire.

2. Mechanics.

Approximately one-half of the total sample or 377 students (graduate and non-graduate) were provided with questionnaires on which was printed information regarding their curriculum, the last date attended, and whether or not they graduated. Names did not appear on this questionnaire.

Another group which numbered 391, graduate and non-graduate, was sent the questionnaire which contained their name, the curriculum in which they were enrolled, the last date they attended, and whether or not they graduated. Again, the reason for dividing the sample in such a manner was to test whether anonymity would have any appreciable effect on the number of questionnaires returned.

Each of the students received a letter explaining the project and urging them to candidly complete the form and to make any other comments they desired on the back of the form. Each student was supplied with a business reply envelope in which to return the questionnaire. The mailing was by bulk mail on March 15 and March 16, 1972. See Appendix C.

The portion of the sample who were mailed questionnaires anonymously were sent a blanket follow-up letter and another copy of the questionnaire on March 30, 1972, or approximately two weeks after the original mailing. During these two weeks, questionnaires returned totaled 6%. In the one-week period immediately after the mailing of the follow-up letter (dated March 29, 1972, Appendix D), returns increased by approximately 16%. At this point the total returned was about 22%. Ultimately, returns from this group reached approximately 27%.

The portion of the sample who were mailed questionnaires with their name received no mailed follow-up. This was deliberately done although this would reduce the total number of returns. The decision had been made to call

only those alumni who could be contacted through the High Point or Greensboro telephone exchanges. Over half the sample who received questionnaires with their name had an address listed within this area. Perhaps sending a follow-up to the portion of this sample living outside the Greensboro-High Point area would have produced some slight increase in total returns. It was felt that sufficient returns would be obtained without this mailing. The principal purpose was to evaluate the method of obtaining returns. This took precedence over the number of returns.

Three hundred ninety-one questionnaires were mailed with names. Within approximately two weeks responses were received from 16.1%. After calling was completed, returns from this group totaled approximately 27%.

A breakdown of the 768 recipients of the questionnaire showed them distributed as follows: Of the 1970 graduates, 99 were seeking diplomas and 48 were seeking degrees, for a total of 147. Of the 1971 graduates, 26 were certificate students, 57 were degree students, and 131 were diploma students, for a total of 214. The total 1970-71 graduates numbered 361. Everyone in the sample attended GTI sometime from the beginning of the fall quarter 1970 through the summer quarter 1971. For non-graduates, the decision was made to use only degree and diploma students because the inclusion of certificate students would have created an insurmountable problem in obtaining names of these students from the files. Large numbers in this category and a filing system in transition prompted this decision. To have included all certificate non-graduates would have produced an unnecessarily large and unwieldy sample. Further, most certificate courses are taught at night and from experience it is known that many of those who enroll in such courses do so for their own personal enrichment. The elimination of these non-graduate certificate people from the study was not believed to materially affect the results.

A total of 407 non-graduates and 361 graduates were selected for the final sample. The final returns of 27.3% is approximately what one would expect. The returns showed a response rate of 35% from the 361 graduates of the institution. The 407 non-graduates responded at a rate of 19.9%, for an overall return of 210 from 768 mailings, 377 without the names included, 391 with the names included. Of the 391 questionnaires with names, 105 responded and 69 gave salary information. Of 377 mailed without names, 105 responded and 84 gave their salary. There was a slight indication that the absence of the name enhances the probability of return and increases the probability of salary data being given. Questionnaires with names were returned at the rate of 26.8%; without names, at the rate of 28%.

Table I shows number of responses by curriculum for graduates, non-graduates, and total responses. In Table I, and subsequent tables, the figure of 206 is used for the number of responses. A total of 210 responses were received, but four were not usable, leaving 206 for our analysis.

TABLE I

TOTAL RESPONSES TO QUESTIONNAIRE BY CURRICULUM

CURRICULUM	Grad.	Non-grad.	Total
ACCOUNTING	1	3	4
ARCHITECTURAL TECHNOLOGY	2	6	8
ASSOCIATE DEGREE IN NURSING	0	3	3
AUTOMOTIVE MECHANICS			
Certificate	1	0	1
Diploma	5	4	9
AVIATION MANAGEMENT TECHNOLOGY	0	1	1
BUSINESS ADMINISTRATION	3	15	18
CIVIL TECHNOLOGY	4	0	4
COMMERCIAL ART & ADVERTISING DESIGN			
Certificate	3	0	3
Degree	7	2	9
COSMETOLOGY	20	6	26
DENTAL ASSISTANT	13	2	15
DATA PROCESSING	0	10	10
DENTAL HYGIENE	10	1	11
DRAFTING AND DESIGN	0	2	2
ELECTRONICS TECHNOLOGY	7	9	16
MACHINE SHOP	2	0	2
MACHINIST TRADE	0	1	1
MECHANICAL DRAFTING	6	0	6
PRACTICAL NURSE PROGRAM	35	5	40
SECRETARIAL SCIENCE	7	8	15
UPHOLSTERY	0	1	1
WELDING	0	1	1
TOTALS	126	80	206

3. Results.

Salary figures are always of interest. Table II shows the distribution of monthly salaries for the 206 respondents, divided into certificate, diploma, and degree candidates, and identified as graduates or non-graduates.

TABLE II

AVERAGE SALARY BY PROGRAM

Program	Graduates	Non-graduates
CERTIFICATE	$597.88	(not sampled)
DIPLOMA	$385.53	$437.67
DEGREE	$534.47	$502.82

Table III shows the breakdown of salaries by program for graduates and non-graduates by certificate, diploma, and degree programs. The numbers in parentheses indicate the number of respondents in each cell.

TABLE III

SALARY DATA BY CERTIFICATE, DIPLOMA, AND DEGREE;
BY GRADUATE AND NON-GRADUATE

CURRICULUM	Certificate		Diploma		Degree	
	Grad.	Non-g.	Grad.	Non-g.	Grad.	Non-g.
ACCOUNTING					445(1)	387(2)
ARCHITECTURE					192(1)	588(4)
ASSOCIATE DEGREE, NURSING						413(3)
AUTOMOTIVE MECHANICS	640(1)		427(4)	447(3)		
AVIATION MANAGEMENT						10 hr.(1) (flying)
BUSINESS ADMINISTRATION					528(2)	551(8)
CIVIL TECHNOLOGY					632(3)	
COMMERCIAL ART & ADVERTISING DESIGN	545(2)				425(7)	350(2)
COSMETOLOGY			320(16)	456(2)		
DATA PROCESSING						708(5)
DENTAL ASSISTANT			348(10)	453(1)		
DENTAL HYGIENE					668(8)	400(1)
DRAFTING & DESIGN						500(1)
ELECTRONICS					639(7)	470(7)
MACHINE SHOP	708(1)					
MACHINIST TRADE	respondent did not indicate salary					
MECHANICAL DRAFTING	586(4)					
PRACTICAL NURSE PROGRAM			425(32)	450(1)		
SECRETARIAL SCIENCE					407(7)	379(5)
UPHOLSTERY				322(1)		
WELDING				460(1)		

The group with the highest average earnings were graduates who hold certificates. These are people working in such jobs as drafting, machine shop, heating and air conditioning, and welding. The next highest average salary included graduates of degree programs. These are people in electronics, data processing, architecture, commercial art, etc. The next highest salary bracket comprised non-graduates in degree programs, something of a surprise. The next highest were non-graduates in diploma programs, and finally graduates in diploma programs, who made up the lowest paid group. There is some indication that the mean salary of diploma graduates was depressed somewhat because a fairly large number of people employed in cosmetology was included in this group. The figure for average salaries for cosmetology people is quite low. When average salary for this group of graduate diploma students is recalculated eliminating cosmetology, the average is upped almost $90.00 per month. This may have some fairly strong implications for guidance programs. Girls entering cosmetology should be aware of the fact that the salaries per month reported on this questionnaire run as low as $200.00. These figures may be distorted by the fact that most cosmetologists receive very low base wages and depend on tips to substantially increase their take-home pay.

The interesting question of why non-graduates from degree programs have such a relatively high salary (they are the third highest group) and considerably above diploma graduates, seems to be that many people come to technical institutes to take courses for their own personal enhancement. This is borne out by individual responses returned with the questionnaires. Many people who enroll in these courses already have degrees. Written comments, Appendix E, which were returned to us indicate that many people undertake courses at GTI simply to make them more aware, make them more proficient, or to make their jobs somewhat easier, although it is not required by

their employer. In almost all cases, they finance their own tuition in contrast to many students who are subsidized by their employers or who are aided by federal funds.

Usable responses totaled 126 graduates and 80 non-graduates. Of these, it was found that 107 were presently employed in a job for which they trained and 99 were not employed in a job for which they trained. These almost equal numbers are not readily explainable, although a partial explanation attends to the same issue just described. Many technical institute students come to take courses for their own enrichment. Accountants may be ham radio operators who come to take a course in radio or electronics. They do not intend to work at this, but it is a source of personal satisfaction. People in technical fields come to take courses in things like machine shop because they want to be able to create some of their own devices and have no intention of working as a machinist, although the new skill may be useful in the job in which they are presently employed.

Question 2 about salary has already been discussed in terms of the graduate/non-graduate in certificate, diploma, and degree divisions. Of the 153 respondents who gave salary figures, the average salary was $463.88 per month. This ranges from a low of $200.00 for some cosmetology people to a high of $1,240.00 reported by one person enrolled in a degree program, but who was a non-graduate.

Question 3 reads: "If you are not presently employed in a job for which you trained, why not?" Eleven people responded that there were no jobs available for which they trained. Thirteen indicated that jobs for which they trained were available, but their training was insufficient. Thirteen said they originally took a job for which they trained, but they are presently doing another kind of work. Three are not working in a job of that nature because of medical reasons. Twelve are furthering their education.

Ten are homemaking. Two are not working in the job for which they trained because of military obligations or draft classifications. A surprising total of 50 gave the response of "other." This required some investigation.

Analysis of their reasons indicated that 9 could well have been placed under one of the existing categories. A total of 12 responses were related to the fact that the person did not stay in school long enough. Four people indicated that they didn't try to find a job in the field or they were working at some other job before they came to GTI and then went back to it and continued it. One person indicated that the training he took was simply not essential to his field and perhaps this could be absorbed into another category. Three responses could have been added to medical, because they involved maternal or family illnesses. Eight of the responses indicated a lack of job satisfaction after they trained and began working, and they are now working at something else. Ten people indicated they came only for personal enrichment. There was a total of 3 responses which could not be easily categorized and would be included under "other" or "miscellaneous" in the revised version of the instrument. One individual indicated that after he left he bought a bar and grill, another had draft classification problems, and still another simply said he had no interest in the course. In a revision of the instrument, the following classifications will be added: (1) Did not stay in school long enough, (2) Dissatisfaction with the work for which I trained, (3) Personal enrichment, and (4) Did not try to find job in field. Obviously, the "other" category will remain for the few extraneous responses that usually accrue.

A total of 114 respondents answered question 3, with 24 of them indicating that either (A) no jobs were available for which they trained or (B) jobs for which they trained were available, but the training was insufficient. This means that about 21% of these respondents trained for jobs which did not

exist or for which they were inadequately trained. This strong signal suggests a more in-depth look at those who responded in this fashion. Obviously, one would want to know the precise training these people attempted and whether they completed the curriculum. It is a simple matter to isolate the "no jobs available" responses and determine if a pattern exists. This was done with the following results:

TABLE IV

RESPONDENTS WHO FOUND NO JOBS AVAILABLE FOR WHICH THEY TRAINED OR WHO SAID JOBS WERE AVAILABLE BUT TRAINING WAS INSUFFICIENT.

CURRICULUM	Number responding to Question 3 (A) or (B)	Graduate	Non-grad.	Total overall response to questionnaire
ACCOUNTING	2		2	4
A. D. NURSING	1		1	3
AUTOMOTIVE MECHANICS	2	1	1	10
BUSINESS ADMINISTRATION	4		4	18
COMMERCIAL ART	2	2		12
DATA PROCESSING	2		2	10
DENTAL ASSISTANT	1	1		15
ELECTRONICS	5		5	16
MECHANICAL DRAFTING	1		1	6
SECRETARIAL SCIENCE	3		3	15
WELDING	1		1	1
TOTALS	24	4	20	

The 24 respondents who indicated that either no jobs were available for which they trained or that jobs were available but that their training was insufficient represent 11 curricula and show 20 non-graduates and only 4 graduates. The 4 graduates who gave either an "A" or "B" response were two

people in Commercial Art, one in Automotive Mechanics, and one in Dental Assistant. A total of 37 people responded from these three curricula and only four graduates indicated difficulty in finding a job for which they trained. The 20 non-graduates who indicated difficulty in finding a job for which they prepared are distributed across eight curricula with Electronics and Business Administration majors being more prevalent. Further insight into their difficulty might be gained by determining how much training they underwent before they dropped out of school. This was not done in the present instance but is cited as an example of how the basic returns may be utilized to raise and satisfy further questions.

Question 4 reads: "How necessary was your school training in getting your present job?" One hundred ninety-two responded to this question. Eighty-five indicated that the training was "required" to obtain the job, 28 said it was "very helpful," 21 said it was "of some help," 19 said it was "no help at all," and 39 said it was "not applicable." This makes a total of 134 responses indicating that the training was at least of some help all the way to very helpful with a majority (85) indicating that without the training they would not hold their present job. The 39 "not applicable" responses again reflect the large number of people who either switch jobs after they leave or come to take courses not related to their work experience.

In answer to question 5, "To what extent are you using your school training in doing your present job," 74 indicated that without the training the job could not be performed, 39 found it very helpful, 29 found their training of some help, 14 found the training of no help at all, and 38 found it not applicable. This is a total of 194 responses. Again, the necessity of the training is borne out quite sharply by these figures.

Question 6 related to course content and whether the course covered more than the student needs to know, just about what he needs to know, or less than

what he needs to know to do his job. A total of 131 of the 167 responses fell in the first two categories, while 36 indicated that the program covered less than they needed to know to do the job. This, of course, cuts across all the programs in the school, making it necessary for the results to be analyzed by curriculum to determine whether action should be taken. If the majority of these 36 responses showed up in a particular curriculum, then it would behoove one to investigate more completely.

TABLE V

DISTRIBUTION OF 36 RESPONDENTS WHO FELT THAT THEIR PROGRAM OF TRAINING COVERED LESS THAN WHAT THEY NEEDED TO KNOW TO DO THEIR JOB.

CURRICULUM	Number responding to Question 6C	Graduate	Non-grad.	Total overall response to questionnaire
ACCOUNTING	1		1	4
AUTOMOTIVE MECHANICS	3	2	1	10
BUSINESS ADMINISTRATION	7		7	18
*CIVIL TECHNOLOGY	4	4		4
COMMERCIAL ART	3	3		12
COSMETOLOGY	2	2		26
DATA PROCESSING	3		3	10
ELECTRONICS	2	2		16
MACHINE SHOP	1	1		2
MECHANICAL DRAFTING	2	2		6
PRACTICAL NURSE PROGRAM	6	6		40
SECRETARIAL SCIENCE	2	2		15
TOTALS	36	24	12	

*One is furthering his education.

TABLE VI

WORK EXPERIENCE OF 24 GRADUATES WHO INDICATED THEIR TRAINING PROGRAM COVERED LESS THAN WHAT THEY NEEDED TO KNOW TO DO THEIR JOB.

CURRICULUM	Presently employed in a job for which you trained?		Job Title
	Yes	No	
CIVIL TECHNOLOGY	x		Inspector
	x		Construction engineer
	x		Highway technician II
		x	Furthering education
AUTOMOTIVE MECHANICS		x	(not given)
		x	machine maintenance
COMMERCIAL ART		x	Previously employed as audio-visual coordinator
	x		Art director
		x	Bookbinder
COSMETOLOGY	x		Cosmetologist
	x		Beautician
ELECTRONICS		x	Mechanical engineering technician
	x		(not given)
MACHINE SHOP	x		Master research machinist
MECHANICAL DRAFTING		x	(not given)
		x	Engineering laboratory
PRACTICAL NURSE	x		LPN
	x		LPN
	x		LPN - emergency room
	x		LPN - public health
	x		LPN
	x		office nurse
SECRETARIAL SCIENCE	x		Secretary
	x		Secretary
	16	8	

As evidenced in Table V, the 36 who indicated that the program covered less than they needed to know to do their jobs are distributed across 12 curricula, with Business Administration and the Practical Nursing Program representing almost 40% of the returns. Of these 36, 24 are graduates of programs and 12 are non-graduates. It is somewhat disturbing to find 24 graduates insisting that they got less than what was required from their course of study. Table VI shows a breakdown of these 24 graduates with an emphasis on determining whether or not they are employed in jobs related to the training they received. Sixteen are so employed, while eight are working in some other field. Of the 16 employed in jobs related to their training who are dissatisfied with their course content, 6 are practical nurses and 3 are employed in civil technology.

Question 7 asks the individual to rate from "superior" to "poor" the teaching for each of five course groupings. The course groupings are divided arbitrarily with English and Social Studies consisting one group. Twenty-three respondents indicated that the instruction in English and Social Studies was "superior," 53 said it was "average," 12 indicated that the instruction was "below average," and 13 indicated it was "poor."

In the area of "Lecture Courses in the Major Area of Study," 50 people said the instruction was "superior," 73 said it was "very good," 43 said it was "average," only 5 indicated "below average," and 4 indicated "poor." The "Shop, Lab and Clinic Courses in the Major Area of Study" had 49 who rate it "superior," 60 as "very good," 54 "average," 14 "below average," and only 3 as "poor." In the "Lecture Courses Outside the Major Area of Study," 18 indicated superior teaching, 62 indicated very good teaching, 58 average teaching, 6 below average, and 4 poor. For the "Shop, Lab and Clinic Courses Outside the Major Area of Study," 23 indicated "superior," 41 "very good," 64 "average," 10 "below average," and only 3 "poor." It is interesting to note that English and Social Studies had more "below average" and "poor"

responses than any other category with a total of 25 respondents marking "below average" or "poor." Lecture courses within the major area of study generated quite high marks with only a total of 9 "below average" and "poor" ratings. It is somewhat surprising to find that lecture courses in the major area of study had a total of only 9 responses in the two less favorable categories.

It is easy to note that shop, lab, and clinic courses either in or outside the major area of study had more "below average" and "poor" responses than did the lecture courses. Apparently, students have different aspirations and expectations for lecture courses than for laboratory or shop courses.

Question 8 refers to the amount of training aids and equipment available for training purposes. Categories of instruction are the same as in question 7. In English and Social Studies only 10 people indicated insufficient training aids. In Lecture Courses in the Major Area of Study, 11 indicated that aids and equipment were not sufficient. Shop, Lab, and Clinic Courses Inside the Major Area of Study revealed 18 respondents indicating an insufficient amount, although 65 people said there was always plenty, and 69 said there was usually enough.

For Lecture Courses Outside the Major Area of Study, only 3 people indicated that aids were too few and for Shop, Lab, and Clinic Courses Outside the Major Area of Study 6 people felt that aids and equipment were insufficient. Apparently, the amount of available equipment and training aids is not of much concern in this particular institution because of 771 responses to this question, only 48 or 6% were in the "not enough" category.

Question 9 is a quantitative measure of training aids and asked the individual to rate the equipment according to how modern and appropriate it was for the job. For each category respondents consistently indicated that the

equipment was modern and quite appropriate. The responses ran in the 90's for "very modern and appropriate," in the 50's for "adequate but needs updating," and fewer than 12 for "not adequate." In fact, the most responses in any one category as "not adequate" is Lecture Courses in the Major Area of Study, and only 11 people indicated that the equipment was not modern and appropriate for the job.

In Shop, Lab, and Clinic Courses in the Major Area of Study, the responses may be cause for a bit of concern. Ninety-five indicated "very modern and appropriate," but 71 said the aids are "adequate but needs updating." This 71 is significantly more than responded in this category for any other of the course divisions. Obviously, an analysis of their responses by curriculum would be in order.

A look at some salary figures may be of interest. Of those who graduated, who say they are presently employed in a job for which they trained, and whose questionnaires were sent with names indicated that the average salary is $472.97. Of those whose questionnaires were sent without names, who graduated, and who are employed in a job for which they trained, the average salary is $453.09. A comparison between the graduates who are employed in the business for which they trained and those who are not, indicated that those working in the job for which they trained and who graduated are averaging $462.92 (disregarding whether or not the questionnaires had the respondent's name). Those who are not working in a job for which they trained averaged $406.83. For graduates who are working in a job for which they trained, there is a decided advantage in salary.

Those who did not graduate and are employed in a job for which they trained earn an average of $414.14, while those who did not graduate and are not employed in a job for which they trained are earning an even $500.00.

To recap, for graduates of programs working in a field for which they trained, the average salary is $462.90. For graduates not working in a field for which they trained, the average is $406.83, a difference of more than $56.00 in monthly wages. Non-graduates working in the field for which they trained earn $412.71 monthly, but non-graduates not working in the field in which they trained average an even $500.00 per month. There are logical explanations for this that have been cited previously. The most important one is that many people in this category took a course or two with no intention to graduate, simply for their own self-enrichment. People come to this institution to take courses to help them in their work, help them in their homelife, and help them in everyday living. They come to take automotive courses so they can make minor repairs; they come to take courses that allow them to do their own upholstery and carpentering or to do some of the jobs that tangentially relate to their work although it is not absolutely necessary that they take these courses.

See Appendix F for a breakdown of total responses to questions on follow-up survey instrument.

4. Response data.

Phase II of the investigation related to attempting to find the best method of securing responses. Part of this activity was the follow-up of the original mailing with telephone calls to individuals. Obviously, these people had to be the ones who had been mailed questionnaires with their names on it so that non-respondents could be identified from our master list. The sample was further restricted to people within the area, because the majority of the people on the list did live within the High Point-Greensboro area. Of the people who did not respond and had questionnaires with names, 171

individuals were called. Some of these calls were placed more than once. Calling proved to be terribly time consuming. One of the most inconvenient factors was that the majority of people that were dealt with were working, and it was necessary to place the calls late in the afternoon or at night. Once the calls were placed and contact was made, substantial results were obtained. Of the calls made 40 numbers did not respond, 30 were wrong numbers according to persons with whom verbal contact was established, and 12 had been disconnected and were not in service. This is a total of 82 non-responses out of the 171 calls which were attempted. Contact was attempted with 89 individuals out of the 171. Of these, 14 agreed to respond over the phone, 8 asked that another questionnaire be mailed to them because they said that they had never received the first one. This information was doubted because the address most gave was the same one to which the original questionnaire was mailed. Twelve responded after the telephone reminder by either mailing in their original questionnaire or filling in a questionnaire mailed to them as a result of the call. As a direct result of the telephone survey there were 26 who responded. From the total of 171 calls we placed this means that 15% resulted in some kind of response. Actually, 89 were contacted, so the 26 responses resulted in a 30% efficiency of returns. There is no evident difference in the responses of these 26 individuals compared to the remainder of the responses which were received as a result of the original mailing without the personal contact. It does not appear that this kind of a prompt over the telephone results in information that is biased. A close analysis for this purpose was not attempted, but a brief examination as the questionnaires were returned did not reveal any systematic differences.

Direct telephone contact would be one method of enhancing the response ratio and would be worthwhile unless the long distance tolls would be

prohibitive. This could result in a replication of this study in a less urban area. If the contact rate experienced held true for an institution in a location where it was necessary to make many long distance calls, an analysis should be made to determine the point of diminishing returns. It would seem that each institution must determine what is best. In Greensboro, Guilford Technical Institute is fortunate that a sufficient number of the sample lived in the immediate area. We made no long distance telephone calls.

D. MODIFICATIONS

1. Format.

The format of the pilot instrument proved amenable to hand compilation and appeared to be totally satisfactory to those who returned questionnaires. See Appendix G for charts used for hand compilation of data in the pilot study. We had no adverse comments concerning the layout, question structure, or style of the instrument. It proved easy to work with in terms of re-organizing the data to respond to different questions as they came up during the analysis of the data. Although some institutions may choose to have more sophisticated printed forms, the use of standard office machinery to duplicate the questionnaire is entirely in order. The single basic modification of the format recommended is to indicate, for each response, the corresponding card column so that key-punching may be done directly from the questionnaire when computer application is desired.

2. Content.

It would seem from the foregoing that the instrument revealed a simplicity of responding that appealed to the recipient. Returns were about as good as normally expected from this kind of questionnaire. There was very little confusion except on question 3, where 50 respondents recorded "other" as their choice.

The following changes were made in this question to give precise answers. One choice, not available on the trial questionnaire, now reads "didn't stay in school long enough." Another choice is "personal enrichment," and still a third choice indicates the individual did not try to find a job in the field. The choice of "medical reasons" has been expanded to include maternity

and family concerns. Of course, the "other" category should be retained. See Appendix H for the complete revised questionnaire.

There seems to be quite a variety of reasons why people do not work in jobs for which they were trained. Even though 10 choices seem unusual for a single question, it appears that all of them are indeed necessary.

There should be an opportunity to determine why dropouts did not graduate. There is no evidence as to why this is true, and a single question inserted after number 3 should read: "If you did not graduate, why not?" The alternatives that attach to this question are quite numerous. However, the following choices will cover most contingencies: (a) personal, medical, and family concerns, (b) military (including draft and active service), (c) moved away from the area, (d) financial, (e) did not intend to graduate when I enrolled, (f) personal enrichment, and (g) other (specify).

Instead of requesting respondents to use the back of the questionnaire to indicate courses they intend to take, this additional question will be presented: "Are you interested in taking other courses at (name of institution)? Yes___No___. What courses? _____"

E. CONCLUSION

The instrument as revised following pilot testing seems geared directly to the concerns of the state's technical institutes and community colleges. The format lends itself to both hand compilation and machine treatment.

The questions included are of a diverse nature and cover the areas of greatest concern to the institutions. For the purposes of long-range planning at the state level, perhaps some selectivity is required.

The items included seem to be the very minimum to cover all aspects of what individual institutions find of concern. Some of these items (teacher evaluation, availability of equipment, etc.), although of great concern to the institutions, are probably not proper considerations for long-range planning.

With these things in mind, the items have been so arranged that page one of the questionnaire contains items of interest to both the individual institutions and at the state level. While the entire questionnaire would be analyzed at the institutional level, the responses on the first page could easily be transmitted to the Department of Community Colleges and Technical Institutes for aggregation and analysis. In this fashion a single instrument could satisfy the needs at both levels. The idea of a single application is appealing in terms of practicality, as well as being very attractive economically. Should this become the mode of application, the details to be worked out (card layout, curricula codes, printed versus duplicated forms, etc.) are minimal and of a nature best determined at a more central level.

Perhaps no data gathering instrument is ever perfect, but it is felt that the present instrument accurately reflects the concerns of North Carolina's community colleges and technical institutes and will provide data both for institutional self-study and for central long-range planning.

APPENDICES

Appendix A	Letters of November 16, 1971, and December 2, 1971, to presidents of technical institutes and community colleges
Appendix B	Letter of February 23, 1972, to presidents of technical institutes and community colleges enclosing proposed questionnaire and rationale
Appendix C	Letter of March 15, 1972, to student sample
Appendix D	Letter of March 29, 1972, follow-up to one-half of student sample
Appendix E	Respondents' Written Comments
Appendix F	Breakdown of Total Responses to Questions on Follow-Up Survey Instrument
Appendix G	Charts used for hand compilation of data
Appendix H	Revised Questionnaire

APPENDIX A

GUILFORD TECHNICAL INSTITUTE

JAMESTOWN, NORTH CAROLINA 27282

November 16, 1971

As the enclosed letter from Dr. Luther R. Medlin, President of Guilford Technical Institute, indicates, we are in the process of developing an instrument for follow-up studies on a state-wide basis for the community colleges and technical institutions of North Carolina.

The utility of any follow-up instrument depends almost entirely upon the ability of institutions to administer the instrument and to analyze the data from the instrument once it is gathered. In many attempts to evaluate the schools' processes, researchers include so many questions that interpretation of the results becomes a real problem. It seems to us that a follow-up instrument readily applicable to more than 50 institutions throughout the state must have as one of its major qualities that of brevity. We say this believing that it is more useful to ask a limited number of questions and use the results rather than ask pages of questions whose answers will lie unevaluated on a shelf gathering dust.

We suspect that most administrators would appreciate some sort of a follow-up instrument that would be easily applied on a yearly basis and whose analysis would not require inordinate amounts of time and unusual demands on the present staff.

We believe that a good follow-up instrument should allow an institution to gather responses from its alumni as well as from those who have attended the school and for some reason left before they completed their program. Such an instrument could provide data important in program initiation, development, and modification, and would be essential to the guidance program of the institution. Questions of placement, job availability, and the necessity to create new programs for the demands that exist could be investigated by the use of such an instrument.

The instrument needs to be concise and compact for two purposes. First, to increase the proportion of respondents; people are more inclined to answer a short questionnaire. Second, a brief questionnaire is more manageable when the returns are being analyzed, and the results have a far greater chance of being used.

In view of the foregoing, would you please provide me with the following information (these are also on an enclosed form for convenience):

PHONE: GREENSBORO 292-1101 / HIGH POINT 454-1126

1. Do you at present provide some sort of follow-up survey for people who have either:

   (a) withdrawn before completion of a program, or
   (b) have completed a program at your institution?

2. How frequently do you administer such a follow-up if you do carry on a follow-up survey at present?

3. Would you send me a copy of the instrument you use if you are presently conducting a follow-up survey of people completing your program?

4. Regardless of whether you are presently conducting a follow-up survey or not, would you please list what you consider to be the six most important questions that you would ask of people who have attended your institution?

The intent here is to gather questions from all the institutions in the system to determine what comparability exists. It is anticipated that from this present mailing a sufficiently large number of questions will be generated so that they may be packaged in the form of a questionnaire and resubmitted for your consideration and further comments.

We are looking forward to working with you, and we are depending on your cooperation to make this a successful venture in creating productive annual follow-ups on the students leaving the Community College and Technical Education System of North Carolina. Your comments and suggestions will be welcomed, and you are encouraged to express any ideas you have concerning this activity at whatever length you choose.

Sincerely,

John L. Saunders

John L. Saunders, Director
Educational Follow-Up Research Project

JLS:M
Encls.

GUILFORD TECHNICAL INSTITUTE

JAMESTOWN, NORTH CAROLINA 27282

November 16, 1971

Dear Colleague:

It is important that any educational endeavor assess itself on a regular basis. The results of such follow-up studies provide data essential to program initiation, development and modification. In addition such information is crucial to the guidance program of individual institutions.

Several technical institutions and community colleges are already involved in follow-up studies. The effectiveness of these studies varies from institution to institution. Traditionally each unit has developed its own follow-up instrument. As a result, comparability of data suffers and the system loses the potential to aggregate the results of local studies to obtain a more comprehensive state picture.

Guilford Technical Institute has been awarded a grant to devise and pilot test an instrument for follow-up studies that could have state-wide applicability. Mr. John L. Saunders has been appointed Director of this project. He will be contacting you soon to seek your cooperation, to inquire about your present follow-up activities and to request assistance in the project.

Please note that the Department's research project, the "Information Center" at Forsyth Technical Institute includes a requirement to develop a system for student follow-up. These two research efforts have been coordinated, they will not be duplicating, and the coordination will be continued. The "Information Center" will not be contacting institutions but will use the information obtained by the Guilford Technical Institute Research Project.

Let me urge that you place this matter in the hands of someone on your campus who perceives the advantages that can accrue from this endeavor and who will extend Mr. Saunders and his assistants full cooperation.

Sincerely,

Luther R. Medlin

Dr. Luther R. Medlin, President

PHONE: GREENSBORO 292-1101 / HIGH POINT 454-1126

RETURN TO:

Dr. John L. Saunders
Guilford Technical Institute
P. O. Box 309
Jamestown, N. C. 27282

NAME OF COLLEGE OR TECHNICAL INSTITUTE

_____

1. Do you at present provide some sort of follow-up survey for people who have either:

   (a) withdrawn before completion of a program, or

   (b) have completed a program at your institution.

2. How frequently do you administer such a follow-up if you do carry on a follow-up survey at present?

3. Would you send me a copy of the instrument you use if you are presently conducting a follow-up survey of people completing your program?

4. Regardless of whether you are presently conducting a follow-up survey or not, would you please list what you consider to be the <u>six</u> most important questions that you would ask of people who have attended your institution?

GUILFORD TECHNICAL INSTITUTE

JAMESTOWN, NORTH CAROLINA 27282

December 2, 1971

Recently we contacted you concerning Guilford Technical Institute's Research project to devise a follow-up instrument for Community Colleges and Technical Institutes in North Carolina.

We note that a response from your school has not reached us. I know only too well how busy you, your faculty and staff are. Still, we would like to have input from each institution if at all possible. Will you help us? We are enclosing a copy of the brief survey that accompanied our first letter.

We will greatly appreciate your assistance in this project, and we are looking forward to receiving your response soon.

Sincerely,

John L. Saunders
Project Director

JLS:M

Encl.

PHONE: GREENSBORO 292-1101 / HIGH POINT 454-1126

APPENDIX B

EDUCATIONAL FOLLOW-UP RESEARCH PROJECT

NORTH CAROLINA DEPARTMENT OF COMMUNITY COLLEGES

John L. Saunders, Ed.D
Project Director
P. O. Box 309
Jamestown, N. C. 27282

On November 16, 1971, we contacted you requesting your assistance in devising a follow-up study questionnaire that might have state-wide applicability. We received replies from 45 institutions indicating the status of their current follow-up practices and providing us with copies of follow-up forms presently being used.

We analyzed the current forms and decided that the following areas of interest are consistent among almost all institutions: (1) employment status of student; (2) effectiveness of school's training; (3) utilization of school's training; (4) quantative and qualitative measures of programs; and (5) equipment and materials. We believe that these elements, properly cast, when combined with student data already on record, will provide an effective measure of the school's activity in a concise, manageable form. Too, we believe the brevity of the instrument so constructed will be a definite positive factor in increasing responses.

The format of the questionnaire draft lends itself to local duplication with little or no problem in keypunching directly from the form if computer application is the goal. It is evident that hand compilation is readily accomplished in this format.

We feel that the information provided by this instrument, collected annually and used, is sufficient. It would be quite an easy matter to extend this questionnaire to four or five times its present length. In keeping with our decision to create a brief, workable format, we believe that this effort approaches the minimum number of questions we must include in order to derive the needed information.

Please examine the enclosed questionnaire in light of your needs and evaluate it as a possible instrument for annual distribution and analysis. Consider the things you really have to know to make administrative decisions on programs and processes and counsel us as to whether such knowledge can be gained by using this instrument. If modifications are requested, please be specific as to the nature of such modifications and specify why those modifications are necessary.

Your reaction to this instrument will be given careful attention. Please respond as quickly as convenient.

Sincerely yours,

John L. Saunders

John L. Saunders
Project Director

JLS:M
Enclosures

NAME _____

Curriculum _____ Last Date Attended _____

Graduate: Yes ____, No ____. County of residence _____

1. Are you presently employed in a job for which you trained at this institution? Yes ____, No ____. Give your job title: _____

2. If you have no objections, please give your hourly or weekly salary before any deductions. Hourly _____ or Weekly _____

3. If you are not presently employed in a job for which you trained, why not? (In some cases more than one check will be needed.)

   ___A. No jobs available for which I trained.

   ___B. Jobs for which I trained were available but my training was insufficient.

   ___C. I originally took a job for which I trained but I am presently doing another kind of work.

   ___D. Medical reasons.

   ___E. Furthering my education.

   ___F. Homemaking.

   ___G. Military.

   ___H. Other (specify) _____

4. How necessary was your school training in getting your present job? (check one)

   ___A. Required.

   ___B. Very helpful.

   ___C. Of some help.

   ___D. No help at all.

   ___E. Not applicable.

5. To what extent are you using your school training in doing your present job? (check one)

   ___A. Couldn't do my job without the training.

   ___B. Find the training very helpful.

   ___C. Find the training of some help.

   ___D. Find the training of no help at all.

   ___E. Not applicable.

6. Sometimes students find that programs contain courses that are not useful to the jobs they take. Sometimes some subjects were not covered well enough or other courses should be included in the program. Rate the program you took. (check one)

___A. The program covered more than I needed to know to do my job.

___B. The program covered just what I needed to know to do my job.

___C. The program covered less than what I needed to know to do my job.

7. Using the scale from Superior to Poor, evaluate the teaching for each of the course groupings in which you studied. Use only one check for each.

	Superior	Very Good	Average	Below Average	Poor
English/Social Studies					
Lecture Courses in Your Major Area of Study					
Shop/Lab/Clinic Courses in Your Major Area of Study					
Lecture Courses Outside Your Major Area of Study					
Shop/Lab/Clinic Courses Outside Your Major Area of Study					

8. In most courses training aids and equipment are used for demonstration and practice. Here we are interested in the amount of available equipment. Rate the amount of available equipment and training aids for each of the course groupings in which you studied.

	Always Plenty	Usually Enough	Just enough to get by	Not Enough
English/Social Studies				
Lecture Courses in Your Major Area of Study				
Shop/Lab/Clinic Courses in Your Major Area of Study				
Lecture Courses Outside Your Major Area of Study				
Shop/Lab/Clinic Courses Outside Your Major Area of Study				

9. No matter how available, unless equipment and training aids are modern and appropriate for the job, the quality of instruction suffers. By the major course groupings listed below, rate the equipment used according to how modern and appropriate it was for the job.

	Very Modern and Appropriate	Adequate but Needs Up-Dating	Not Adequate
English/Social Studies			
Lecture Courses in Your Major Area of Study			
Shop/Lab/Clinic Courses in Your Major Area of Study			
Lecture Courses Outside Your Major Area of Study			
Shop/Lab/Clinic Courses Outside Your Major Area of Study			

RATIONALE

The number of questions has been deliberately kept to a bare minimum for two reasons: (1) respondents are more likely to complete a brief questionnaire than a lengthy one; and (2) the work required to aggregate the responses is minimized.

One half of the study sample will be provided forms with their names typed in; the other half will not have the name on the form in order to determine the effect identification of the respondent has on the disclosure of salary data. We will enter the curriculum, the last date attended, and whether or not the student graduated before mailing. The respondent will supply the county of residence. In our cover letter, we will ask the respondent to indicate on the back of the form any additional courses or training that he desires. His present county of residence will be of importance when examining the responses to determine the geographical location where additional offerings are most needed.

Question 1 will be used to determine whether or not different programs are supplying people to work in similar jobs. The job title serves as a handy cross-reference to the respondent's perception as to whether or not his present job was one for which he trained.

The next question asks for weekly or hourly salary. This is one of the few objective measures questionnaires such as this generate. This information can be used for a variety of purposes, the most obvious of which is to correlate salary with curriculum to determine information useful in the counseling program.

Question 3 cross-checks with question 1 to determine the reason for unemployment. This question has strong implications for guidance as well as curriculum modifications, depending on the pattern of answers forthcoming.

Questions 4 and 5 relate to getting and keeping a job. It is necessary to separate the two. People may be hired as a result of the credentials they present; but in order to remain employed, they must produce on the job. These two questions will help us to evaluate the influence of the respondent's schooling upon obtaining a job and upon keeping a job once it has been secured.

Question 6 provides us with a qualitative measure of the program the student was exposed to, while question 7 deals with the qualitative aspects of teaching. The breakdown of courses in questions 7, 8 and 9 seem to be adequate for all the community colleges and technical institutes. If this is not the case for your institution, please suggest what additional breakdowns of courses would be appropriate.

Questions 8 and 9 provide qualitative and quantative measures of the equipment and training aids.

APPENDIX C

EDUCATIONAL FOLLOW-UP RESEARCH PROJECT

NORTH CAROLINA DEPARTMENT OF COMMUNITY COLLEGES

John L. Saunders, Ed.D
Project Director
P. O. Box 309
Jamestown, N. C. 27282

March 15, 1972

Dear GTI Alumnus:

The State of North Carolina has asked Guilford Technical Institute to conduct a research project to help determine how effectively the technical institutes and community colleges are serving their students. Of the several thousand former students who have received education beyond high school at GTI, 768 were selected to help GTI with this task. You can see, therefore, how important you are both to GTI and North Carolina.

Please take about five minutes to answer just nine questions. Your factual answers to these basic questions will shed much light as to how GTI can better its programs. Also, these same questions can be asked by the whole system of technical institutes and community colleges; therefore, all of North Carolina can benefit.

Your answers will be treated in complete confidence and no one will ever have access to your answers except the person totaling the responses. No individual will ever be named in any reports generating from these responses. Please be perfectly frank with your answers. If you wish to comment on items not covered in the brief questionnaire, feel free to write on the back of the form.

Thank you for your cooperation.

Sincerely yours,

John L. Saunders

John L. Saunders
Project Director

A. P. Lochra

A. P. Lochra, Dean
Student Services, GTI

JLS/APL:m
Enclosures

Curriculum _____ Last Date Attended _____

Graduate: Yes ____, No ____. County of residence: _____

1. Are you presently employed in a job for which you trained at this institution? Yes ____, No ____. Give your job title: _____

2. If you have no objections, please give your hourly, weekly, or monthly salary before any deductions. Hourly _____ or Weekly _____ or Monthly _____

3. If you are not presently employed in a job for which you trained, why not? (In some cases more than one check will be needed.)

   ___A. No jobs available for which I trained.

   ___B. Jobs for which I trained were available but my training was insufficient.

   ___C. I originally took a job for which I trained but I am presently doing another kind of work.

   ___D. Medical reasons.

   ___E. Furthering my education.

   ___F. Homemaking.

   ___G. Military

   ___H. Other (specify) _____

4. How necessary was your school training in getting your present job? (check one)

   ___A. Required.

   ___B. Very helpful.

   ___C. Of some help.

   ___D. No help at all.

   ___E. Not applicable.

5. To what extent are you using your school training in doing your present job? (check one)

   ___A. Couldn't do my job without the training.

   ___B. Find the training very helpful.

   ___C. Find the training of some help.

   ___D. Find the training of no help at all.

   ___E. Not applicable.

6. Sometimes students find that programs contain courses that are not useful to the jobs they take. Sometimes some subjects were not covered well enough or other courses should be included in the program. Rate the program you took. (check one)

___A. The program covered more than I needed to know to do my job.

___B. The program covered just what I needed to know to do my job.

___C. The program covered less than what I needed to know to do my job.

7. Using the scale from Superior to Poor, evaluate the teaching for each of the course groupings in which you studied. Use only one check for each.

	Superior	Very Good	Average	Below Average	Poor
English/Social Studies					
Lecture Courses in Your Major Area of Study					
Shop/Lab/Clinic Courses in Your Major Area of Study					
Lecture Courses Outside Your Major Area of Study					
Shop/Lab/Clinic Courses Outside Your Major Area of Study					

8. In most courses training aids and equipment are used for demonstration and practice. Here we are interested in the amount of available equipment. Rate the amount of available equipment and training aids for each of the course groupings in which you studied.

	Always Plenty	Usually Enough	Just enough to get by	Not Enough
English/Social Studies				
Lecture Courses in Your Major Area of Study				
Shop/Lab/Clinic Courses in Your Major Area of Study				
Lecture Courses Outside Your Major Area of Study				
Shop/Lab/Clinic Courses Outside Your Major Area of Study				

9. No matter how available, unless equipment and training aids are modern and appropriate for the job, the quality of instruction suffers. By the major course groupings listed below, rate the equipment used according to how modern and appropriate it was for the job.

	Very Modern and Appropriate	Adequate but Needs Up-Dating	Not Adequate
English/Social Studies			
Lecture Courses in Your Major Area of Study			
Shop/Lab/Clinic Courses in Your Major Area of Study			
Lecture Courses Outside Your Major Area of Study			
Shop/Lab/Clinic Courses Outside Your Major Area of Study			

APPENDIX D

EDUCATIONAL FOLLOW-UP RESEARCH PROJECT

NORTH CAROLINA DEPARTMENT OF COMMUNITY COLLEGES

John L. Saunders, Ed.D
Project Director
P. O. Box 309
Jamestown, N. C. 27282

March 29, 1972

Dear GTI Alumnus:

A questionnaire was mailed to you approximately two weeks ago as part of a research project being conducted by the State of North Carolina to determine how effectively the technical institutes and community colleges are serving their students. Seven hundred sixty-eight former GTI students were selected to help with this task. If you have not returned the questionnaire to us, we urge you to do so as soon as possible. The information you can provide is important to us for the purposes of our study and will be valuable data for Guilford Technical Institute.

As you know, this questionnaire was sent to you anonymously. You can be certain that no individual will ever be identified in any reports generating from responses to this questionnaire. We are enclosing another copy of the form, also anonymously, for your convenience if you have misplaced the first one.

Your prompt attention to this matter will be most appreciated.

Sincerely yours,

John L. Saunders
Project Director

A. P. Lochra
Dean, Student Services, GTI

JLS/APL:m

Enclosure

APPENDIX E

RESPONDENTS' WRITTEN COMMENTS

ACCOUNTING

"I am posting accounts receivable on a bookkeeping machine which I was trained on after accepting my present job. The training in accounting which I received at GTI was far superior to my present job. Thus, I feel some of my answers on this sheet may be unfair to GTI for rating purposes. My accounting courses offered excellent training. The only drawback being lack of up-to-date accounting equipment. I have eliminated the second sheet of this project because (as explained above) of the unfair reaction it would present against GTI as to training-and-present-job relationships. In summary, I feel GTI offered superior training in the accounting courses and should I have accepted a job equal to the training, it (the job) would have indeed been challenging and satisfying."

ARCHITECTURE

"(Lecture courses in major area of study) - very dull. (Shop/lab/clinic courses in major area of study) Instructor not there enough--due date assignments constantly postponed. Equipment very expensive--not enough discount on books."

"I am a little down on the English Department. The English I took while at GTI needs to be updated to a Freshman level of English. I think all the courses could be made harder."

"I am in the Army and a former student at GTI. I left the institution because of my overwhelming chances of getting drafted. I went ahead and came in the service to get it behind me. I have future plans to return to GTI upon completion of my military obligation which is June of 1973. I plan to enter in the fall quarter, as a business administration student, so if you could send me the brochure on the latest curriculum studies at GTI it would be greatly appreciated."

ASSOCIATE DEGREE IN NURSING

"I can't say I'm really qualified to give my opinion of the facilities and courses in the RN program. I was a student at GTI for only 4 months. Hardly adequate for a solid opinion. Anytime I can give any further help to you, feel free to ask."

AUTOMOTIVE MECHANICS - Certificate Program

"My curriculum was auto mechanics. While I was attending GTI, I found that the policy of the school was leaning away from training in "blue collar" fields and more towards "white collar" curriculums which seemed to get priority. It is my belief that this is one of the general deficiencies in the American educational system. However, technical school training is still one of the biggest bargains available."

AUTOMOTIVE MECHANICS - Diploma Program

"The only complaint or problem I have run into in the two years that I attended GTI was as follows: we were told there would be an automatic transmission course at a certain time but at the last moment it was cancelled. Fortunately, some of us were able to get into a welding class which we would have needed to take sooner or later anyway. The point is that I have checked with GTI and if they offer automatic transmissions this spring I will have had to wait over one year to get one course. Also, they haven't offered the front end alignment course. To make another point, if I am able to return in the spring, which is unlikely, for several reasons, it will have taken me approximately 3½ years to be able to obtain and complete a 2 year curriculum."

(comments by phone) - Although not employed in auto mechanics field, is stock clerk at Wills Book Store, and has found math and English he took while at GTI a great deal of help in his present job. Felt English and math classes were too large, though. Feels students need to develop a more positive attitude about going to school--a lot of them go just because their friends are going. Enrolled in Automotive Mechanics because friends were doing same and he depended on them for transportation. Would have liked computer or business curriculum, but hours would not have coincided with hitching a ride with his friends.

BUSINESS ADMINISTRATION

"During the time that I was at GTI I enjoyed it very much. The training that I received while attending GTI was more than enough to help me get a good job. My reason for leaving was because I found that it wasn't really what I wanted to do and I decided to stop and work until I was sure. There is one part of my life that GTI played which was very important. I was able to be in different plays and go to different schools for speech competition. The experience was one that I will never forget."

"I hold an AA degree from Wingate College. I received this degree prior to entering GTI. Wingate is a school of high academic standards, but I feel that GTI is very close to these same standards. My training at GTI was to supplement my overall education and I feel that my training was very helpful."

"I'm planning to return to GTI later. Had to transfer to get accounting for credit last fall."

COMMERCIAL ART & ADVERTISING DESIGN - Degree Program

"You may have noticed that I specified a need for up-dating equipment in my field. Since I graduated there have been improvements in equipment and facilities. But while I was attending GTI, the course did not cover a full range of information I would need in future employment."

"I do not feel that I am qualified to answer this questionnaire. I wasn't at the school long enough to become thoroughly familiar with the subjects and equipment. My reasons for leaving school were not due to any failures on the part of the school. I felt that I was not talented enough to continue the course. As far as the school and the faculty, I certainly didn't have any complaints. I liked the school and found the faculty friendly and willing to be of any help they could. In my opinion, GTI is a much needed and a very effective institute. I'm sorry I can't be of any more help to you."

"The school training programs laid a permanent basis for my type of work. A great deal of overall success is based on specific areas of training; however, "moneymaking" proficiency is also based on speed and accuracy . . . not to exclude "experience" in a particular job type area."

(comments by phone) - Commercial Art curriculum seemed to be involved too much in fine art rather than commercial art (this individual attended one quarter). Too slow about getting into the commercial end. Also, too expensive. Had to purchase all supplies outside school because bookstore did not carry. In one quarter spent $150 for art supplies only to find would not be needing them until third or fourth quarter. Also, bookstore hard to get into. Later, went to Technical Institute of Alamance and had much better experience. All art supplies were available at school at wholesale prices and equipment was plentiful--sharp contrast to GTI.

COMMERCIAL ART & ADVERTISING DESIGN - Certificate Program

"Concerning the use of my training in my present job, I must say that at present it is not too applicable. Many occasions arise, however, that provide opportunities for use. For example, friends ask me for posters advertising various occasions or sometimes to illustrate poems and songs written by kindergarten children at church. Recently, there was a mission study at church for which I did a bit of decorating. Of course, one must seek ways to make the most of his talent in any field. The courses offered a good basic foundation as far as possible."

COSMETOLOGY

"For some courses the classes were large and just one teacher wasn't able to provide the help that was needed by all of the students. Speaking from experiences, I would like to have been able to have had more individual help which was needed."

"I am now enrolled in Greensboro's School of Beauty on Greene Street. The reason for my transfer from GTI was the transportation. I also work in the day at Greensboro Manufacturing. My hours here are from 7:30 to 4:15. From there I go to school, and get out about 8:30-9:00."

"Due to a separation, I had to fall out of my course in cosmetology. I enjoyed my class very much, and regretted having to drop. I hope to finish some day. My instructors well taught the courses involved. I also thought the way things were taught and the equipment were satisfactory. GTI is a great opportunity for many people, especially those with situations like mine. Like I said, some day I wish to complete my course."

(comments by phone) - Instructors treated everyone as individuals--plenty of individual attention and instruction.

DATA PROCESSING

"Would have been good to see computer in action."

"I took the course to enable me to use in future or if I was in a company using computers to be able to talk or communicate properly with those in that department. The company I am now with is in the process of thinking about computers. I took two courses. One was cobol and the other fortran. In cobol the instructor was very good if not excellent, but in fortran he was not as well through no fault of his own, but he had no training in this language and therefore was handicapped."

"My GTI record may have been of some help in my re-entering the university. I do use my knowledge of programming to do statistical problems in psychology, which is my major. The teacher was not good enough or hard enough. I really did not take enough courses for my opinion to count very much. I was only at GTI for one quarter. The computer lines were out of order a great deal, but the equipment was adequate."

(Shop/lab/clinic courses in major area of study) "Terminal hookup to Research Triangle sufficient, but lacks personal touch that persons unfamiliar with computers need."

DENTAL ASSISTANT

"The Dental Assisting Program was very good except there was not enough clinic experience, need more time working chairside."

"Some subjects needed more time than was given them. (Lecture courses outside major area of study) - Felt some were not related to my field of study. (Shop/lab/clinic courses in major area of study) - More would have been helpful."

"Most of the girls in my class felt that the English courses were wasted time - time that could have been used in a lab that would have benefited us more. These classes were fairly interesting but they proved to be somewhat of a "rerun" of four years of high school English."

DENTAL HYGIENE

"I only attended GTI for two weeks. Presently, I am a sophomore at Elon College majoring in Elementary Education and plan to graduate there in the spring of '73. Although I was only there (GTI) for a very short time, the program was a very good one from what I could comprehend. Because of this reason, I feel that I cannot complete this questionnaire fairly. Thank you for considering me for this project."

"I think this questioneer (sic) is a very good way to help the school improve its program and therefore I do hope you receive a lot of response. However I do feel the Dental Hygiene Curriculum requires more courses than actually needed. English is fine but I think after you take English grammer (sic) in high school you don't need to take grammer (sic) the first year in college."

"All the major courses I studied were needed; however, some of the English courses that were required were really not necessary. The dental hygiene program is excellent."

DRAFTING & DESIGN

"I enjoyed my enrollment very much. The teachers were more than sufficient. Sometime in the future I hope to come back for some auto mechanics. At the time I enrolled, my job had no future. At the end of my enrollment at GTI, I quit my job and went to another company and received advancements."

ELECTRONICS

"At the time of my graduation, new equipment was on order. The equipment we were using were both new and old. The last I heard all the new equipment was in and more on order."

"While attending school I had a full time job, my only means of support. When I accepted the job, it was agreed between my employer and I that I would work from 3:00 p.m. to 11:30 p.m. But after I had finished one year of school, my employer changed my working hours leaving me with no choice but to drop out of school. That's why I didn't continue school after last summer's quarter. But I would like very much to finish, and maybe someday I will."

"English courses and electronics courses were the only courses taken during the summer quarter I attended GTI."

"I found it impossible to answer some of the questions asked, because I was not in school long enough to become familiar with all that was available for training in my curriculum. Furthermore, the instructors I had were very good ones and had no bearing whatsoever on my leaving school. My main reason for leaving school was insufficient funds and not being able to find a part time job near my home. I consider the school an excellent one and vital to the area. It should be supported in every possible way."

"I've found Guilford Technical Institute to be a very fine school, however the library facilities should be updated and more books added to the collection. I wish to return someday after I have successfully completed my present endeavor."

"The lab equipment used in electronics is usually adequate but for the advanced circuitry used today and more sophisticated test gear is needed so that the student will have every advantage to become thoroughly familiar with its use, which knowledge is indispensable in the field. The English courses are generally good but more emphasis is needed toward the writing of technical reports."

"I would very much like to see more courses in my major (electronics) be offered at night. I know there are more people who attend at night who would like to see the same thing, but just don't know who to voice their requests to."

MACHINE SHOP

"I had had over 1100 hours of formal machine shop training in other schools, plus I had journeyman papers from 4 years of apprenticeship training. Wondering why I came to GTI? To get that certificate."

"As a lab technician I have to do several jobs, and it's nice to be able to go to a lathe and make a part that I need. Otherwise I would have to wait for it for hours or days. In my work it pays to have knowledge of machine shop, electrical and electronics. I had the job I've got now, but felt like the training would help me on the job, and it has."

MECHANICAL DRAFTING

"While I was at GTI I had a job which was related to my major. The instruction I got at the school was very necessary in my job and by the time I had finished one year of my program I was able to handle the job very well. I am graduating from UNC-C in May and I will again be using what I learned at both schools in my future work at Corning Glass Works in Wilmington, N. C."

PRACTICAL NURSE PROGRAM

"Referring to question #6, I checked letter A because I feel as though I did not need to take Social Studies or English. I do not and doubt seriously that I will use Social Studies in my job, and as for English, the course that I took has not been useful yet. If the course in English had been different, such as grammer (sic), then it probably would have been helpful. As for my main subject, Practical Nursing, it covered everything I needed to know very well."

"Thank you for asking me to share in your follow-up program. GTI provided me an opportunity to receive the education, which I needed to complete my ambition to become a nurse. I am enjoying my work to the fullest and the salary is good. I enjoy working at Wesley Long. The staff and nurses are lovely people and most helpful to work with. I appreciate the education, which I was able to complete at GTI. I think Guilford Technical Institute has rovided this community with many opportunities and many individuals, like myself, have realized their ambitions and dreams to come true for them through GTI. Thank you."

"I am very pleased with the quality and quantity of training I had for the course preparing me to take N. C. State Board for LPN license. The teaching was both thorough and up to date. Since I have had 2½ years schooling for RN, I feel qualified to judge the quality of my course. I have only one complaint to make, and that is the lack of clinical experience and the unorganized program of lab and clinic classes, as well as the attitude of the teacher who was supposed to guide us and check us on these. Because of my previous schooling and 25 years of staff nursing, I did not suffer from the lack of clinical and lab experience as some of the other students in my class. I realize, of course, that we were a special group, already LPN's with years of experience, but there were a few in the class who really needed a better course of lab and clinical teaching and observation than we had. I have praised and recommended GTI to many people since I enrolled there, and would certainly continue to associate with GTI if I decide to further my education."

"I would like to see GTI offer a refresher course during the evening for Licensed Practical Nurses. This should include some lab routines and learning to read the different studies done."

"I am now giving total patient care to seventeen patients on the second shift by myself and one ade (sic). I could not have done this without my very good training at GTI. Thanks to all who helped me."

"The courses that were taught at GTI by _____ were a waste of time! Later when our class was taught by the instructors from High Point Memorial Hospital, it was time well spent."

(comments by phone) - "One instructor fell short. Since I am working in the emergency room of the hospital as an LPN, I feel the course I took at GTI covered less than I needed to know to do my job because of lack of training in emergency room procedures. We were required to pay an activity fee--felt this was not fair if you cannot participate. So many in the class were older women who had families and these activities were not that important to them. Experience at GTI was very good. Have heard that GTI LPN graduates were over-taught. I made a very high grade on state board."

(comments by phone) - "There is a definite need for more training in geriatrics--therefore, my training at GTI covered less than what I needed to know to do my job because I am involved in geriatric nursing. Notice that other nursing schools are training their nursing students in this area."

SECRETARIAL SCIENCE

"In my particular curriculum, equipment was not needed. The only course I took in which we needed equipment was Data Processing. Computers were not available to the class."

"I really did not complete the full course - stopped to take a job and love my job! Thanks to GTI."

"I feel that more subjects should be taught pertaining to the medical field for medical secretaries."

"The English courses were very important; however, I did not feel they covered needed areas. Out of three English courses, the remedial English course is the only one I really learned from. If the courses would cover more useful topics such as the basic fundamentals rather than discussion classes and theme reading, the courses would be more useful. There isn't a college in the area that could offer a better typing or shorthand class. These two classes helped me tremendously in finding a good job. Even though I did not graduate, these courses helped a great deal in finding a job."

APPENDIX F

BREAKDOWN OF TOTAL RESPONSES TO QUESTIONS ON FOLLOW-UP SURVEY INSTRUMENT

NAME _____

Curriculum _____ Last Date Attended _____

Graduate: Yes 126, No 80. County of residence: _____

1. Are you presently employed in a job for which you trained at this institution? Yes 107, No 99. Give your job title: _____

2. If you have no objections, please give your hourly, weekly, or monthly salary before any deductions. Hourly _____ or Weekly _____ or Monthly _____

3. If you are not presently employed in a job for which you trained, why not? (In some cases more than one check will be needed.)

   11 A. No jobs available for which I trained

   13 B. Jobs for which I trained were available but my training was insufficient.

   13 C. I originally took a job for which I trained but I am presently doing another kind of work.

   Total response to Question #3: 114

   3 D. Medical reasons.

   12 E. Furthering my education.

   10 F. Homemaking.

   2 G. Military.

   50 H. Other (specify) _____

4. How necessary was your school training in getting your present job? (check one)

   85 A. Required.

   28 B. Very helpful.

   Total response to Question #4: 192

   21 C. Of some help.

   19 D. No help at all.

   39 E. Not applicable.

5. To what extent are you using your school training in doing your present job? (check one)

   74 A. Couldn't do my job without the training.

   39 B. Find the training very helpful.

   Total response to Question #5: 194

   29 C. Find the training of some help.

   14 D. Find the training of no help at all.

   38 E. Not applicable.

6: Sometimes students find that programs contain courses that are not useful to the jobs they take. Sometimes some subjects were not covered well enough or other courses should be included in the program. Rate the program you took. (check one)

65 A. The program covered more than I needed to know to do my job.

66 B. The program covered just what I needed to know to do my job.

36 C. The program covered less than what I needed to know to do my job.

Total response to Question #6: 167

7. Using the scale from Superior to Poor, evaluate the teaching for each of the course groupings in which you studied. Use only one check for each.

	Superior	Very Good	Average	Below Average	Poor
English/Social Studies	23	66	53	12	13
Lecture Courses in Your Major Area of Study	50	73	43	5	4
Shop/Lab/Clinic Courses in Your Major Area of Study	49	60	54	14	3
Lecture Courses Outside Your Major Area of Study	18	62	58	6	4
Shop/Lab/Clinic Courses Outside Your Major Area of Study	23	41	64	10	3

8. In most courses training aids and equipment are used for demonstration and practice. Here we are interested in the amount of available equipment. Rate the amount of available equipment and training aids for each of the course groupings in which you studied.

	Always Plenty	Usually Enough	Just enough to get by	Not Enough
English/Social Studies	42	85	19	10
Lecture Courses in Your Major Area of Study	62	80	18	11
Shop/Lab/Clinic Courses in Your Major Area of Study	65	69	23	18
Lecture Courses Outside Your Major Area of Study	34	78	19	3
Shop/Lab/Clinic Courses Outside Your Major Area of Study	37	74	18	6

9. No matter how available, unless equipment and training aids are modern and appropriate for the job, the quality of instruction suffers. By the major course groupings listed below, rate the equipment used according to how modern and appropriate it was for the job.

	Very Modern and Appropriate	Adequate but Needs Up-Dating	Not Adequate
English/Social Studies	97	53	9
Lecture Courses in Your Major Area of Study	94	53	11
Shop/Lab/Clinic Courses in Your Major Area of Study	95	71	10
Lecture Courses Outside Your Major Area of Study	77	55	7
Shop/Lab/Clinic Courses Outside Your Major Area of Study	72	51	10

APPENDIX G

PAGE I

CURRICULUM _____

		Question #1 Yes	Question #1 No	Question #2
GRADUATES	Certificate			
	Degree			
	Diploma			
NON-GRADUATES	Degree			
	Diploma			

PAGE II

CURRICULUM _____

		Question #3								Question #4				
		A	B	C	D	E	F	G	H	A	B	C	D	E
GRADUATES	Certificate													
	Degree													
	Diploma													
NON-GRADUATES	Degree													
	Diploma													

PAGE III

CURRICULUM _____

			Question #5					Question #6			Question #7					
			A	B	C	D	E	A	B	C	-	Sup.	Very Good	Av.	Below Av.	Poor
GRADUATES	Certificate										Eng.					
											Lec. I.					
											Shop I.					
											Lec. O.					
											Shop O.					
	Degree										Eng.					
											Lec. I.					
											Shop I.					
											Lec. O.					
											Shop O.					
	Diploma										Eng.					
											Lec. I.					
											Shop I.					
											Lec. O.					
											Shop O.					
NON-GRADUATES	Degree										Eng.					
											Lec. I.					
											Shop I.					
											Lec. O.					
											Shop O.					
	Diploma										Eng.					
											Lec. I.					
											Shop I.					
											Lec. O.					

PAGE IV

CURRICULUM _____

			Question #8				Question #9		
			Always Plenty	Usually Enough	Just enough to get by	Not Enough	Very Mod. and Approp.	Adequate but needs up-dating	Not Adequate
GRADUATES	Certificate	Eng.							
		Lec. I.							
		Shop I.							
		Lec. O.							
		Shop O.							
	Degree	Eng.							
		Lec. I.							
		Shop I.							
		Lec. O.							
		Shop O.							
	Diploma	Eng.							
		Lec. I.							
		Shop I.							
		Lec. O.							
		Shop O.							
NON GRADUATES	Degree	Eng.							
		Lec. I.							
		Shop I.							
		Lec. O.							
		Shop O.							
	Diploma	Eng.							
		Lec. I.							
		Shop I.							
		Lec. O.							

APPENDIX H

Questionnaire Code
(___ ___ ___ ___)
(1) (2) (3) (4)

NAME _____

Curriculum _____ (_____) Last date attended Day _____ Month _____ Year _____
(5-6) (7-8) (9-10) (11-12)

Graduate: Yes ____ No ____. County of residence: _____
(13) (14-15)

1. Are you presently employed in a job for which you trained at this institution?
Yes ____ No ____. Give your job title: _____
(16)

2. If you have no objections, please give your hourly, weekly, or monthly salary before any deductions. Hourly _____ or Weekly _____ or Monthly _____
(17-20)

3. If you are not presently employed in a job for which you trained, why not? (In some cases more than one check will be needed.)

(21, 22)
___A. (0) No jobs available for which I trained.
___B. (1) Jobs for which I trained were available but my training was insufficient.
___C. (2) I originally took a job for which I trained but I am presently doing another kind of work.
___D. (3) Medical reasons (including maternity and family illness)
___E. (4) Furthering my education.
___F. (5) Homemaking.
___G. (6) Military.
___H. (7) Did not stay in school long enough.
___I. (8) Dissatisfaction with the work for which I trained.
___J. (9) Took the course for personal enrichment.
___K. (10) Did not try to find job in field.
___L. (11) Other-specify _____

4. How necessary was your school training in getting your present job? (Check one.)

(23)
___A. (1) Required.
___B. (2) Very helpful.
___C. (3) Of some help.
___D. (4) No help at all.
___E. (5) Not applicable.

5. If you did not graduate, why not? (Check one.)

(24)
___A. (1) Personal, medical, and family concerns.
___B. (2) Military (including draft and active service).
___C. (3) Moved away from the area.
___D. (4) Did not intend to graduate when I enrolled.
___E. (5) Financial.
___F. (6) Personal enrichment.
___G. (7) Other-specify _____

6. To what extent are you using your school training in doing your present job? (Check one.)

(25)
___A. (1) Couldn't do my job without the training.
___B. (2) Find the training very helpful.
___C. (3) Find the training of some help.
___D. (4) Find the training of no help at all.
___E. (5) Not applicable.

7. Are you interested in taking other courses at this institution? Yes ____ No ____.
What courses? _____

8. Sometimes students find that programs contain courses that are not useful to the jobs they take. Sometimes some subjects were not covered well enough or other courses should be included in the program. Rate the program you took. (Check one.)

(26) ___A. (1) The program covered more than I needed to know to do my job.
___B. (2) The program covered just what I needed to know to do my job.
___C. (3) The program covered less than what I needed to know to do my job.

9. Using the scale from Superior to Poor, evaluate the teaching for each of the course groupings in which you studied. Use only one check for each.

	(1) Superior	(2) Very Good	(3) Average	(4) Below Average	(5) Poor
(27) English/Social Studies					
(28) Lecture Courses in Your Major Area of Study					
(29) Shop/Lab/Clinic Courses in Your Major Area of Study					
(30) Lecture Courses Outside Your Major Area of Study					
(31) Shop/Lab/Clinic Courses Outside Your Major Area of Study					

10. In most courses training aids and equipment are used for demonstration and practice. Here we are interested in the amount of available equipment. Rate the amount of available equipment and training aids for each of the course groupings in which you studied.

	(1) Always Plenty	(2) Usually Enough	(3) Just enough to get by	(4) Not Enough
(32) English/Social Studies				
(33) Lecture Courses in Your Major Area of Study				
(34) Shop/Lab/Clinic Courses in Your Major Area of Study				
(35) Lecture Courses Outside Your Major Area of Study				
(36) Shop/Lab/Clinic Courses Outside Your Major Area of Study				

11. No matter how available, unless equipment and training aids are modern and appropriate for the job, the quality of instruction suffers. By the major course groupings listed below, rate the equipment used according to how modern and appropriate it was for the job.

	(1) Very Modern and Appropriate	(2) Adequate but Needs Up-Dating	(3) Not Adequate
(37) English/Social Studies			
(38) Lecture Courses in Your Major Area of Study			
(39) Shop/Lab/Clinic Courses in Your Major Area of Study			
(40) Lecture Courses Outside Your Major Area of Study			
(41) Shop/Lab/Clinic Courses Outside Your Major Area of Study			